

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF TEXAS
DALLAS DIVISION

PURADIGM, LLC,	§	
	§	
Plaintiff,	§	
	§	
v.	§	
	§	
DBG GROUP INVESTMENTS, LLC,	§	
ACTIVEPURE TECHNOLOGIES, LLC	§	
(f/k/a AERUS HOLDINGS),	§	
ACTIVEPURE MEDICAL, LLC, AERUS	§	CIVIL ACTION NO. 3:23-cv-0216
LLC; AERUS FRANCHISING, LLC, ARS	§	
HOME SOLUTIONS, LLC, AERUS	§	
ENTERPRISE, LLC, VOLLARA, LLC,	§	
and VOLLARA CONCEPTS, LLC,	§	
	§	
	§	
Defendants.	§	

MEMORADUM OPINION AND ORDER

Before the Court is Defendants DBG Group Investments, LLC, ActivePure Technologies, LLC (f/k/a Aerus Holdings), ActivePure Medical, LLC, Aerus LLC, Aerus Franchising, LLC, ARS Home Solutions, LLC, Aerus Enterprise, LLC, Vollara, LLC, and Vollara Concepts, LLC, (collectively “DBG”)’s Renewed Motion for Summary Judgment (Doc. 77). For the reasons that follow, DBG’s Motion is **GRANTED**, and this case is **DISMISSED**.

I.

OVERVIEW OF THE PATENT

At issue is U.S. Patent No. 8,585,979 (“Patent ’979”), which embodies an air purification system. Doc. 43, Defs.’ App’x, 6. In particular, the parties ask the Court to determine the meaning of “specular UV reflector” as used in Patent ’979. The air purifier chamber works by employing

photo-catalytic cells that create bacteria-killing molecules. *Id.* The bactericidal molecules kill bacteria and other pathogens as they intermingle in the air. *Id.* The patented purification chamber is shown in Figure 3 below. *Id.* at 4.

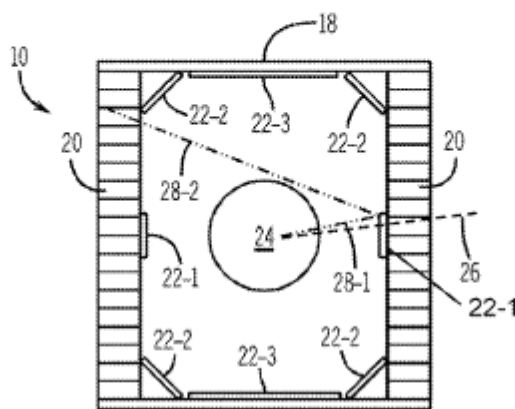


FIG. 3

The chamber directs UV light from a centralized light source (*i.e.* 24) onto a reflector (*e.g.* 22-1, 22-2, 22-3), which reflects the UV light onto a honeycomb target (20) containing the photo-catalytic cells. *Id.*

The provisional application for Patent '979 was filed on September 7, 2010, and the patent was published on November 19, 2013. *Id.* at 2. The patent applicant and inventor David Tupman ("Applicant") assigned the patent to Plaintiff Puradigm, LLC ("Puradigm"). *Id.*

Patent '979 states it responds to the "need for a system in which a higher proportion of UV energy" from the UV light source can be reflected onto the coated honeycomb target. *Id.* at 6. The UV energy is reflected off of reflectors that are "specular." *Id.* at 7. "Specular reflection" is defined in the specification of Patent '979 (the "Specification")¹ as "being a 'mirror-like reflection' of light—

¹ The Specification consists of three sections: Background, Summary, and Detailed Description. Doc. 43, Defs.' App'x, at 6-7. For simplicity's sake, the Court will use the terms "specifies" or the "Specification" to refer to any of these sections.

in which a single incoming ray of light is reflected into a single outgoing direction.” *Id.* Such a one-to-one angle of incidence is illustrated by the angle that vectors 28-1 and 28-2 form in Figure 3 above. *Id.* at 4. To achieve this invention’s level of specular reflection, “it may be necessary to ‘micro-polish’ or ‘buff’ a selected materials [(sic)] reflective surface.” *Id.* at 7. Patent ’979 specifies that despite their small size, the specular reflectors “may be effective because they *may reflect virtually all* of the (normally lost) UV energy” if the reflector were not present. *Id.* at 4, 6. The path of the UV light without a reflector present—i.e., the “normally lost” UV light—is depicted in Figure 3 as “26.” *Id.* Finally, “suitable” specular reflectors are specified to be made of a material that has a “UV reflectivity of about 90% or higher.” *Id.* at 7. The Specification notes that “[l]ower reflectivity produces lower effectiveness.” *Id.* The Specification expressly “relates to exemplary embodiments of the invention” and permits modifications as long as they do not “depart[] from the spirit and scope of the invention.” *Id.*

Puradigm accuses DBG of infringing Patent ’979 through DBG’s V-Groove air purifiers. *See generally* Doc. 71., Am. Compl. DBG moved for leave to file an early motion for summary judgment on Puradigm’s sole claim for patent infringement. *See* Doc. 35, Mot. During the motion hearing on June 21, 2023, DBG presented samples of its V-Groove air purification chamber as well as the chamber in Puradigm’s purifier from Patent ’979. Doc. 46, Hearing Tr., 9. The Court observed Puradigm’s chamber to contain mirror-like reflectors congruent to the “mirror-like” description in the Specification. *Id.* at 13, 16. The Court observed the V-Groove’s unpolished aluminum reflectors to exhibit reflectivity that is plainly dissimilar to that of a mirror. *Id.* at 6. In particular, the Court found that the unpolished aluminum reflectors do not reflect visible light like a mirror. *Id.* at 16. In comparison, the “specular” reflectors in Patent ’979 reflected visible light like a mirror. *Id.* at 15–16.

Neither party, however, presented evidence of how each sample's purification chamber reflects UV light as opposed to visible light.

At issue in this suit is the meaning of "specular" as relevant to Claims 1, 5, and 6 of Patent '979. Doc. 77, Defs.' Br., 27; Doc 33, Puradigm App'x, 67-87 (Miscellaneous Order No. 62 Initial Disclosures);² Doc. 79, Pl.'s Resp., 29-36. The term "specular" is only contained within the term "specular UV reflector," used in Claim 1. Doc. 43, Defs.' App'x, 7. Claim 1 describes the entire purification apparatus. *Id.* The definitions of the remaining six claims of Patent '979 *all* depend on the apparatus as defined by Claim 1. *Id.* Therefore, Claim 1, by defining the apparatus and describing the term "specular," addresses one aspect of all the remaining claims.

The language of Claim 1 is partially reproduced below with the disputed claim term bolded:

1. An apparatus for ionizing air, the apparatus comprising: a chamber including . . .

a first reflector arranged on the top portion of the chamber and configured to:

reflect UV energy emitted along a dimension towards the first target from a UV emitter located within the chamber directly to the photo-catalytic coating of the first target, wherein the first reflector is a **specular UV reflector**, and reflect UV energy emitted along a dimension towards the second target from the UV emitter directly to the photo-catalytic coating of the second target;

a second reflector arranged on the bottom portion of the chamber and configured to:

reflect UV energy emitted along a dimension towards the first target from the UV emitter located within the chamber directly to the photo-catalytic coating of the first target, wherein the second reflector is a **specular UV reflector**.

Id. (emphasis added).

² Rule 3-1 of the Northern District of Texas's Miscellaneous Order No. 62 requires the alleging party to identify the exact patent claims the alleged infringer is violating and the instrumentalities asserted to be infringing.

II.

PROCEDURAL HISTORY

Puradigm initiated this patent suit on January 27, 2023, alleging that certain DBG air purification products infringe Patent '979. *See* Doc. 1, Compl. Soon after, DBG sought leave to file an “early” summary judgment motion based on the meaning of “specular.” Doc. 31, Mot. Leave to File. After holding a hearing to address the parties’ positions, the Court permitted DBG to file an early summary judgment motion. Doc. 40, Mem. Op. and Order. After the parties’ summary judgment briefing was complete, Puradigm sought and was granted leave to file the Amended Complaint. Doc. 71, Am. Compl.; Doc. 70, Order. In its Amended Complaint, Puradigm maintains the same claims but modifies the list of DBG products that Puradigm accuses of infringing Patent '979. *See* Doc. 71-2, Redline, 6. In light of the Amended Complaint, the Court denied without prejudice DBG’s motion for summary judgment as moot. Doc. 72, Order. Thereafter, DBG filed a Renewed Motion for Summary Judgment, which is ripe for review. *See* Doc. 76.

III.

LEGAL STANDARD

“It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004). “A determination of infringement generally requires a two-step analysis—the court first determines the scope and meaning of the claims asserted, and then the properly construed claims are compared to the allegedly infringing device.” *Niazi Licensing Corp. v. St. Jude Med. S.C., Inc.*, 30 F.4th 1339, 1350 (Fed. Cir. 2022). To exclude another from her patent, a patentee must establish infringement by showing that every claim limitation or its

equivalent in her patent can be found in the accused product. See *In re Gabapentin Pat. Litig.*, 503 F.3d 1254, 1259 (Fed. Cir. 2007).

Courts must review intrinsic evidence of the record—the “most significant source of the legally operative meaning” of the patent’s claims—before turning to extrinsic evidence. *Vitronics Corp. v. Conceptiontronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996); see also *Phillips v. AWH Corp.*, 415 F.3d 1303, 1317–18 (Fed. Cir. 2005). First, courts look to the “words of the claims themselves.” *Bell Commc’ns Rsch., Inc. v. Vitalink Commc’ns Corp.*, 55 F.3d 615, 620 (Fed. Cir. 1995). “The ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art [(“POSITA”)] in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Phillips*, 415 F.3d at 1313. The Court may also understand the POSITA’s meaning from reading a patent’s specification and prosecution history, i.e. the “same resources” that would be used by a POSITA. *Id.* at 1312 (citation omitted).

Summary judgment is appropriate “if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” FED. R. CIV. P. 56(a). A dispute “is ‘genuine’ if the evidence is sufficient for a reasonable jury to return a verdict for the non-moving party.” *Burrell v. Dr. Pepper/Seven Up Bottling Grp.*, 482 F.3d 408, 411 (5th Cir. 2007). In determining whether a genuine issue exists, the Court views the evidence in the light most favorable to the non-movant. *Munoz v. Orr*, 200 F.3d 291, 302 (5th Cir. 2000).

IV.

ANALYSIS

DBG contends its V-Groove air purification products do not contain “specular UV reflectors” as encompassed by Patent ’979. Rather than seeking a complete construction of

Puradigm's claims, DBG asks the Court to determine whether Claim 1 encapsulates its UV reflectors. Doc. 77, Defs.' Br., 16. Particularly, DBG contends its unpolished aluminum reflectors are not "specular UV reflectors" under Patent '979. *Id.* at 16–18. DBG presents two arguments in favor of its position. First, DBG argues that "specular," as described within Patent '979, excludes anything that does not "at least" have a "mirror-like" reflection. *Id.* 16–18, 23–25. In response, Puradigm contends that "specular" as used in Patent '979 means "generally" or "predominantly" specular to a POSITA. *See* Doc. 80, Resp., 11–19. According to Puradigm and its expert, the unpolished aluminum reflectors in DBG's V-Groove are "specular reflector[s]" consist with Patent '979 because they create "generally specular" UV reflections, as opposed to generally diffuse UV reflections. *Id.* at 40.

In the alternative, DBG contends it is entitled to summary judgment because the Applicant clearly disclaimed unpolished aluminum from the scope of Patent '979. During the prosecution of Patent '979, DBG argues, the Applicant expressly rejected, or disclaimed, polished aluminum as not reflective enough to be a specular UV reflector under Patent '979. Doc. 77, Defs.' Br., 18–22. By logical consequence the Applicant made a clear disclaimer that unpolished aluminum, a material even less reflective than polished aluminum, was also not suitable for his patent. *Id.* In response to DBG's alternative argument, Puradigm contends the Applicant never made a clear disclaimer because when the Patent Examiner disagreed with the Applicant's purported disclaiming statement, the Applicant never protested. Doc. 80, Resp., 25–29. Puradigm asks the Court to find that because the Applicant did not protest, he "acquiesced" to the Examiner's perspective. *Id.* at 28–29. By acquiescing to the Examiner's perspective, the Applicant did not make a clear disclaimer. *Id.* DBG replies that the Applicant could not have acquiesced because Puradigm has not identified a

statement following the Applicant's disclaimer in which he then *agreed* with the Examiner's view. Doc. 83, Reply, 10–11.

The Court addresses each argument in turn.

A. *Ordinary meaning of “specular”*

Instead of defining the full limits of the term “specular” and the rest of Claim 1, the Court will first try to determine whether an unpolished aluminum reflector is plainly outside the scope of a “specular UV reflector” as the term is used in Patent '979. The Court does so by turning to the plain text of the Claims and then the Specification. Claim interpretation is a question of law that courts may review at the summary judgment stage. *See Gentex Corp. v. Donnelly Corp.*, 69 F.3d 527, 530 (Fed. Cir. 1995). A patent's claim terms must be given “their ordinary meaning in the absence of indication in the patent to the contrary.” *Id.* A claim term also “can be defined only in a way that comports with the instrument as a whole.” *Markmon v. Westview Instruments, Inc.*, 517 U.S. 370, 389 (1996).

1. The words of the claims themselves

The Court observes that each reflector in Claim 1 is defined as a “specular UV reflector.” Doc. 43, Defs.' App'x, 7. While there is no definition provided for the word “specular” in the Claims, *id.*, the ordinary meaning of “specular” is having the characteristics of a mirror. *See, e.g., Specular*, MERRIAM-WEBSTER.COM DICTIONARY, <https://www.merriam-webster.com/dictionary/specular> (defining “specular” as “of, relating to, or having the qualities of a mirror”). Claim 1 describes the form and function of each UV reflector as “configured to . . . reflect UV energy . . . *directly* to the photo-catalytic coating” of the first and second targets. Doc. 43, Defs.' App'x, 7 (emphasis added). Using the word “directly” to modify “reflect” illustrates an intention to

obtain a specular reflectance, or the reflection of a mirror. This intention of a direct reflection is also apparent in Figure 3, which contains an angle of incidence, of UV energy hitting a first UV specular reflector, that matches the angle of reflection of the UV energy reflected onto the honeycomb target. *Id.* at 4 (illustrating 28-1 and 28-2). There, the line of reflection from the specular UV reflector to the honeycomb target (28-2) is singular and “direct” as opposed to depicting a diffuse reflection with multiple rays going in multiple directions from the reflector. *Id.*

The foregoing language as applied to Figure 3 strongly suggests that the “specular UV reflector” has a mirror-like reflection of UV light, as opposed to visible light. Such a conclusion would impede Puradigm’s infringement claim because it means that “every claim limitation” in Patent ‘979 *cannot* “be found in the accused product.” *Gabapentin Pat. Litig.*, 503 F.3d at 1259.

But, viewing the language in the light most favorable to Puradigm, the Court cannot make such a conclusion as a matter of law from the Claims’ language alone. *See Munoz*, 200 F.3d at 302. The Claims do not define a range of reflectivity rates for specular UV reflectors, Doc. 43, Defs.’ App’x, 7, nor has DBG provided the UV reflectivity rate of its unpolished aluminum reflectors. The Claims also do not expressly limit a “specular UV reflector” to certain types of reflective surfaces such that the Court may infer whether unpolished aluminum falls outside the scope of the term. *Id.* Finally, while the testimony and product samples presented at the hearing sufficiently elucidate the meaning of “specular” as applied to the way visible light strikes each sides’ reflectors, the Court cannot confirm such a meaning extends to UV light rays. *See generally* Doc. 46, Hearing Tr. Without further meaning to be derived from the Claims, the Court turns to the Specification of Patent ‘979.

2. The Specification

While the “claims of a patent define the invention,” another intrinsic source reviewed to understand a claim term is the patent’s specification. *Phillips*, 415 F.3d at 1312 (quoting *Innova*, 381 F.3d at 1115); see also *Laitram Corp. v. Morehouse Indus.*, 143 F.3d 1456, 1462 (Fed. Cir. 1998); *V-Formation, Inc. v. Benetton Grp. SpA*, 401 F.3d 1307, 1310 (Fed. Cir. 2005) (explaining intrinsic record “usually provides the technological and temporal context to enable the court to ascertain the meaning of the claim to one of ordinary skill in the art at the time of the invention”).

The express statements in the Specification confirm that Patent ’979 relies on an ordinary meaning of “specular.” The Specification expressly refers to paragraphs 21–26 as setting out the “unique reflective specifications” for its specular UV reflectors. Doc. 43, Defs.’ App’x, 6. There, the Specification states a “specular” reflection is a “mirror-like reflection—in which a single incoming light ray is reflected into a single outgoing direction.” *Id.* at 7. The Specification contrasts its specular UV reflectors’ “surface specular reflection” with a diffuse reflection reflecting light “into a broad range of directions.” *Id.* Further, the specular UV reflectors are specified to have surfaces that “may reflect *virtually all* of the . . . UV energy” that is emitted toward the reflectors. *Id.* at 4. The Court thus does not find there to be a “special definition” for “specular.” Cf. *Vitronics Corp.*, 90 F.3d at 1582 (“Although words in a claim are generally given their ordinary and customary meaning, a patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition of the term is clearly stated in the patent

specification or file history.”). And the property of a mirror that the “specular” UV reflection is intended to be “like” is the single ingoing and outgoing rays of reflection.³ Doc. 43, Defs.’ App’x, 7.

While certain language in the Specification suggests “mirror-like” is extremely narrow, *i.e.*, requiring virtually 100% reflectivity, the Court finds it does not specify the threshold level of reflectivity. *See id.* The Specification acknowledges a “level of reflection required,” indicating there is a contemplated minimum reflectivity rate. *Id.* The Specification also notes that material having a “UV reflectivity of about 90% or higher may be suitable” suggesting Patent ’979 is intended to have a limited range of acceptable reflectivity rates. *Id.* At the same time, such language does not preclude materials having a reflectivity of 85%, for instance, because the Specification states the proposed range “*may* be suitable,” rather than outright excluding lower UV reflectivity rates. *Id.* Thus, the floor or minimum range of reflectivity rates required for Patent ’979 remains uncertain. *See id.*

Especially pertinent to the parties’ dispute is that Patent ’979 does not specify all the materials that can achieve the “reflection required.” *Id.* The Specification states the “particularly effective” reflective surfaces come from “hard metals such as chromium and stainless steel.” *Id.* But there is no threshold surface specified that produces the “reflection required.” *Id.* The closest threshold the Court can glean is that “it may be necessary to ‘micro-polish or buff’ selected materials” to make them sufficiently reflective. *Id.* As a result, the Specification suggests that an unpolished surface, such as unpolished aluminum, cannot achieve “the level of reflection required.” *Id.*

³ Because the Specification states the reflection must be “mirror-like” and not “that of a mirror,” the Court does not find that Patent ’979’s specular UV reflectors are limited to only surfaces with a single ingoing and outgoing ray of reflection.

The “exemplary embodiment,” of “specular” UV reflectors is specified to be soft chrome, further underscoring that unpolished materials are inadequate. *See id.* Soft chrome includes “the plating used to produce a mirror-like finish that is seen on automobile[s].” *Id.* Everyday experience dictates that chromed surfaces on cars producing a “mirror-like finish” are plainly dissimilar from unpolished aluminum. As the Court confirmed during the parties’ oral argument, unpolished aluminum does not produce a “mirror-like reflection” nor is it “micro-polished.” Doc. 46, Hearing Tr., 13–16.

Notwithstanding the above, two aspects of Patent ’979 prevent a finding in DBG’s favor based on the plain meaning argument. First is the Specification’s reference to a distinction between surfaces that are effective for reflecting visible light versus UV light. For instance, gold and silver are specified as “effective reflectors for visible light . . . [but] less suitable” than other metals to produce the requisite UV specular reflection. Doc. 43, Defs.’ App’x, 7. DBG provides no evidence concerning unpolished aluminum’s UV reflectivity versus visible light reflectivity. While the Court finds the vast majority of the Specification to suggest unpolished aluminum is not a “specular” UV reflective surface, DBG has not met its burden as to its first argument for summary judgment. DBG’s laser test certainly indicates that unpolished aluminum produces a diffuse reflection of *visible* light, but says nothing about *UV light*.⁴ Doc. 77, Mot., 25.

The second aspect of the Patent precluding summary judgment is the language in Claim 7, a claim dependent on Claim 1. Doc. 43, Defs.’ App’x, 7. “[T]he presence of a dependent claim that

⁴ On the other hand, Puradigm’s test utilizes UV light, but the Court finds the resulting hazy reflections from the unpolished aluminum reflectors to conflict with the Specification, including plain language specifying a “mirror-like” UV reflection. Doc. 43, Defs.’ App’x, 7. The Court additionally finds Puradigm’s expert’s analysis to be inconsistent with the Specification, and his conclusion “it is visually clear to me that these images [derive] from a specular reflector” to be incomplete. Doc. 81-12, Pl.’s App’x, Milsner Decl., 665. Therefore, the Court does not credit such an opinion. FED. R. EVID. 702(b)–(c).

adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.” *Liebel–Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 910 (Fed. Cir. 2004). Claim 7 expresses a limitation on at least one specular reflector in Claim 1. Doc. 43, Defs.’ App’x, 7. As the only claim to expressly use “specular,” Claim 1 is the independent claim. *See id.* Claim 7 is the dependent claim and states: “The apparatus of [C]laim 1, wherein the first reflector comprises a material having a UV reflectivity of about 90% or greater at UV wavelengths of 185 nm and 254 nm.” Doc. 43, Defs.’s App’x, 7. The language of Claim 7 thus gives rise to the presumption that one specular UV reflector in Claim 1 *does not* have a “reflectivity of about 90% or greater” at the UV wavelength range of 185 nm and 254 nm. *Medrad, Inc.*, 358 F.3d at 910.

There is a hole in the evidence precluding the Court from reading this presumption in DBG’s favor. The record does not disclose unpolished aluminum’s reflectivity of UV light. The presumption Claim 7 raises therefore allows one to read the specular reflector in Claim 1 to possibly have a reflectivity below 90% that could potentially capture unpolished aluminum. As a result, the Court cannot find unpolished aluminum to be out of the scope of Claim 1 based on the words of Patent ’979 alone.

Despite the strong textual basis to conclude that unpolished aluminum does not qualify as a “specular” reflector under Patent ’979, the Court make such a conclusion as a matter of law. When viewing the foregoing language in the light most favorable to Puradigm, the Court finds that reasonable jurors could disagree about the scope of “specular” based on the Specification and presumption raised by the language in Claim 7.

B. *Prosecution of Patent '979*

The Court must turn to the final piece of available intrinsic evidence, the prosecution history, to determine whether there were any express representations made by the Applicant regarding the scope of the claim term “specular.” *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) (“Third, the court may also consider the prosecution history of the patent, if in evidence.”). DBG’s alternative argument turns on a back and forth in the prosecution history between the Applicant of Patent '979 and Patent Examiner.

An applicant’s representations during the prosecution of his patent potentially shed light on a claim’s construction and limitations. *Laitram Corp.*, 143 F.3d at 1462–63. “The doctrine of prosecution disclaimer is well established in Supreme Court precedent, precluding patentees from recapturing through claim interpretation specific meanings disclaimed during prosecution.” *Omega Eng’g Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003) (citations omitted); *NovelPoint Learning LLC v. LeapFrog Enterprises, Inc.*, No. 6:10-CV-229 JDL, 2012 WL 629537, at *4 (E.D. Tex. Feb. 27, 2012). Explicit arguments made during prosecution can lead to narrow claim interpretations. *E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 1438 (Fed. Cir. 1988). But “for prosecution disclaimer to attach, . . . the alleged disavowing actions or statements made during prosecution [must] be both clear and unmistakable.” *Omega Eng’g, Inc.*, 334 F.3d at 1325–26.

In its alternative argument, DBG points to Patent '979’s prosecution history and specifically the Applicant’s statements to the Patent Examiner. DBG argues that the Applicant disclaimed *polished* aluminum and, by logical extension, unpolished aluminum from the scope of “specular” UV reflectors covered by Patent '979. *See* Doc. 77, Renewed Mot., 18–24. In response, Puradigm

contends that there is a genuine issue of material fact as to whether a POSITA reading the prosecution history would find a clear disclaimer made.⁵ Doc. 80, Resp., 25–26.

1. Alleged Disclaimer

According to DBG, the Applicant made the following disclaimer during the prosecution of Patent '979 to rebut the patent officer's conclusion that an existing patent, Bigelow I, already encompassed the “specular” reflectors in Patent '979:

[Bigelow I] discloses only that certain materials have UV “reflectivity.” For example, in the relied-on section of Bigelow, it states that polished aluminum baffles reflect up to 90% of the striking UV. The property of *reflectivity* is distinct from that of *specular reflectance*. Nowhere in Bigelow is anything regarding a specular reflector disclosed – either expressly or inherently.

Doc. 77, Renewed Mot. Br., 18 (emphasis in original) (citing Doc. 43, Defs' App., 96).

The Applicant makes a “definitive statement” that Bigelow I's polished aluminum reflectors do not satisfy Patent '979's “specular” reflectors' reflectivity because they are not reflective enough. *R2 Sols. LLC v. Am. Airlines, Inc.*, No. 4:22-CV-353, 2023 WL 2761124, at *27 (E.D. Tex. Apr. 3, 2023) (finding clear disclaimer from multiple definitive statements in prosecution history). Moreover, there is no ambiguity that the alleged disclaimer is addressing UV reflectivity, as opposed to reflectivity of visual light. *Cf.* Doc. 83, Resp., 25–26; *Parity Networks, LLC v. Hewlett Packard Enter. Co.*, No. 6:17-CV-526-JDK-KNM, 2019 WL 340189, at *9 (E.D. Tex. Jan. 28, 2019) (finding disclaimer where patentee's statements “clearly limit” meaning of a term in patent). From the disclaimer's plain language expressing an intent to distinguish specular reflectivity from the

⁵ Paradigm also asserts that DBG's disclaimer argument should be waived because it was impermissibly introduced in its Reply brief. Doc. 80, Resp., 25. This argument is unavailing. DBG had not yet filed its Reply when Paradigm made this argument, and more importantly, Pages 18–24 of DBG's opening brief are dedicated to DBG's disclaimer arguments. Doc. 77, Renewed Mot., 18–24.

reflectivity of an aluminum reflector, a POSITA would understand the disclaimer to “be both clear and unmistakable.” *Omega Eng’g, Inc.*, 334 F.3d at 1325–26; *Phillips Petroleum Co.*, 849 F.2d at 1438.

Puradigm emphasizes the alleged disclaimer was an isolated statement. Doc. 80, Resp., 28. But the Applicant’s alleged disclaimer is consistent with the terms of Patent ’979. *See Desper Prods., Inc. v. QSound Labs., Inc.*, 157 F.3d 1325, 1333–36 (Fed. Cir. 1998) (concluding prosecution statements were clear and unmistakable disclaimer because they were entirely consistent with the patent’s written description). For example, “suitable” specular reflectors are specified to be made of a material that has a “UV reflectivity of about 90% or higher.” Doc. 43, Defs.’ App’x, 7. In the alleged disclaimer, the Applicant found polished aluminum to be just shy of this range, reflecting only “up to 90%” of UV light. *Id.* at 96 (emphasis added). And the Applicant found this “up to 90%”⁶ reflectivity failed to expressly or inherently comport to a specular reflector. *Id.*

There is nothing ambiguous in the Applicant’s disclaimer of polished aluminum reflectors having “up to 90%” reflectivity from Patent ’979. Puradigm has not pointed to, nor does the Court find, language in the Claims or Specification to contradict the alleged disclaimer. Thus, the Court finds the Applicant clearly and unmistakably disclaimed polished aluminum reflectors. *Omega Eng’g, Inc.*, 334 F.3d at 1325–26. By logical consequence, less reflective materials including unpolished aluminum are also disclaimed.

2. Acquiescence

Puradigm argues that the Court should not find a clear disclaimer because the Applicant ultimately acquiesced to the Patent Examiner’s view that Bigelow I’s polished aluminum reflectors

⁶ Also consistent with the Applicant’s distinction of polished aluminum from other surfaces is the Specification’s statement that specular reflectors “may reflect *virtually all* . . . UV energy.” *Id.* at 4, 6. (emphasis added).

are disclosed by Patent '979. Doc. 80, Resp., 26–29. The Federal Circuit has suggested that evidence of a clear disclaimer can be overcome by evidence that the patentee acquiesced to a view contrary to the disclaimer. *Springs Window Fashions LP v. Novo Indus., L.P.*, 323 F.3d 989, 995 (Fed. Cir. 2003). The plain meaning of acquiescence is to accept or comply tacitly. *Accord Semcon IP Inc. v. ASUSTeK Computer, Inc.*, No. 2:18-CV-00193-JRG, 2019 WL 3063590, at *7 (E.D. Tex. July 10, 2019) (describing acquiescence as “*acceptance* without protest” (emphasis added)). This plain meaning is also consistent with the way the Federal Circuit has used the term acquiescence. *See id.* (discussing *Spring Windows*).

Puradigm mistakenly describes acquiescence as a failure to protest. *Cf.* Doc. 80, Resp., 29 (defining “acquiesced” as “did not protest”). After the Applicant made the disclaimer, the Patent Examiner repeated his contrary view that Bigelow I’s polished aluminum reflectors were captured by Patent '979. Doc. 43, Defs.’ App., 69. The Applicant did not again protest the Examiner’s view. *See id.* at 10–58. After the Examiner repeated his contrary view, and after the clear disclaimer, the Applicant stated he “neither agrees nor disagrees” with the Patent Examiner’s statements. *See* Doc. 43, Defs.’ App’x, 56; Doc. 81, Pl.’s App’x, 336. According to Puradigm, the Applicant therefore acquiesced to the Examiner’s view. Doc. 80, Resp., 26–29. This argument misunderstands the meaning of acquiescence to be the absence of protest. *Id.* at 29. Acquiescence also requires some form of acceptance. *Semcon IP Inc.*, 2019 WL 3063590, at *7.

Missing from the prosecution history is the Applicant’s implied or tacit acceptance of the Examiner’s view that Patent '979 captures polished aluminum reflectors. Expressly choosing *not to agree* with the Patent Examiner’s contrary view also forecloses a finding of acquiescence. *See id.*; Doc.

43, Defs.' App'x, 56; Doc. 81, Pl.'s App'x, 336. Puradigm's emphasis on the neutrality of Applicant's decision is unavailing because the statement still lacks *agreement*. Doc. 80, Resp., 27–28.

The Applicant's "reserv[ation] of [the] right to challenge [the Examiner's] statements in the future," Doc. 43, Defs.' App'x, 56, only reinforces the Court's conclusion. The Applicant can hardly be interpreted as acquiescing when he reserved his right to continue his contentions, including that polished aluminum is not embodied by Patent '979. *Id.* The Court finds no other intrinsic evidence showing that the Applicant expressly or impliedly accepted the Patent Examiner's view after the Applicant's clear disclaimer. *Springs Window Fashions LP*, 323 F.3d at 995. Without evidence overcoming the finding of a clear disclaimer, Puradigm is bound by a narrower interpretation for the term "specular" that excludes polished aluminum. *Omega Eng'g, Inc.*, 334 F.3d at 1325–26; *NovelPoint Learning LLC*, 2012 WL 629537, at *4.

Having carefully and extensively read through the prosecution history, the Court concludes that there is no genuine dispute of material fact that a POSITA reviewing the prosecution history would understand the Applicant to have submitted a clear disclaimer as to polished aluminum reflectors. By logical consequence, Patent '979 disclaims unpolished aluminum as a surface reflecting even less UV light.

C. *Puradigm's Expert Testimony*

In the event intrinsic evidence does not provide a patent claim's scope and meaning, courts may rely on extrinsic evidence to "shed useful light on the relevant art." *Phillips*, 415 F.3d at 1317. While Puradigm's expert, Dr. Thomas Milsner, has offered testimony in support of his construction of "specular," the Court does not find such testimony necessary or helpful to a jury. FED. R. EVID. 702. Milsner's testimony appears to fall into the type of extrinsic source that courts warn provides

overly broad definitions. See *Phillips*, 415 F.3d at 1317. Milsner focuses on differentiating between reflectivity that is “predominantly specular” versus reflectivity that is 100% specular. Doc. 81, Pl.’s App’x, 646–49, 653, 662–64, 714. Nothing in Patent ’979, its Specification, or its prosecution history suggests that the Applicant intended “specular” to be modified by the term “predominant” or to mean generally specular.

The modifier “predominant” does not show up in Patent ’979 or the Specification. *NovelPoint Learning LLC*, 2012 WL 629537, at *3 (explaining extrinsic evidence can be “less reliable than the patent and its prosecution history in determining how to read claim terms” (quoting *Phillips*, 415 F.3d at 1318)); *supra* Part IV.A. The prosecution history contains a clear disclaimer of polished aluminum because it is not sufficiently “specular,” or “mirror-like”—again, there is no mention of the modifier “predominant.” *Supra* Part IV.B. Thus, the expert’s testimony is “not useful,” and the Court does not consider it. *Phillips*, 415 F.3d at 1318; see *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) (citing *Hoechst Celanese Corp. v. BP Chems. Ltd.*, 78 F.3d 1575, 1578, 38 USPQ2d 1126, 1129 (Fed. Cir. 1996) (“A technical term used in a patent document is interpreted as having the meaning that it would be given by persons experienced in the field of the invention, unless it is apparent from the patent and the prosecution history that the inventor used the term with a different meaning.”)).

The Applicant used the qualifications to “specular” that he desired. The qualification that is specified for specular is “UV reflectivity of about 90% or higher.” Doc. 43, Defs.’ App’x, 7. But there is nothing in the intrinsic evidence to connect the “about 90% or higher” language to “predominantly” or generally specular.

In sum, the intrinsic evidence resolves this dispute such that extrinsic evidence is not helpful. The Court's observation of the two purifiers at issue, as well as Patent '979's Claims and Specification strongly suggest that DBG's unpolished aluminum reflectors would not fall within the scope of Patent '979. However, these sources do not permit finding, as a matter of law, that unpolished aluminum are distinct from the "specular" reflectors. Nonetheless, Patent '979 clearly disclaims polished aluminum from the scope of its specular reflectors. As a result, DBG's unpolished aluminum reflectors are also disclaimed from the scope of "specular UV reflector" in Claim 1. All remaining claims in Patent '979 are dependent on the term "specular" in Claim 1. The Court therefore holds as a matter of law that none of the claims in Patent '979 encompass reflectors made from unpolished aluminum. As a result, DBG is entitled to summary judgment.

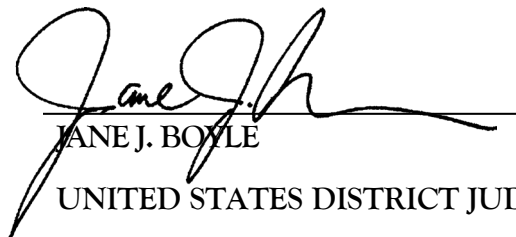
V.

CONCLUSION

The Court finds as a matter of law that Patent '979 clearly disclaims unpolished aluminum reflectors from falling within its scope. Therefore, DBG's motion for summary judgement is **GRANTED**. Paradigm's infringement claims are **DISMISSED WITH PREJUDICE**. A final judgment will follow.

SO ORDERED.

SIGNED: August 29, 2024.


JANE J. BOYLE
UNITED STATES DISTRICT JUDGE